BISS Biodiversity Information Science and Standards

Biodiversity Information Science and Standards 6: e93869
doi: 10.3897/biss.6.93869

OPEN ACCESS

Conference Abstract

NFDI4Biodiversity: a German infrastructure for biodiversity data

Katja Luther‡, Anton Güntsch‡, Birgitta Koenig-Ries§, David Fichtmueller‡

‡ Freie Universität Berlin Botanic Garden and Botanical Museum Berlin, Berlin, Germany
§ Friedrich Schiller University Jena and German Centre for Integrative Biodiversity Research (iDiv), Jena, Germany

Corresponding author: Katja Luther (k.luther@bo.berlin)

Received: 23 Aug 2022 | Published: 23 Aug 2022

Citation: Luther K, Güntsch A, Koenig-Ries B, Fichtmueller D (2022) NFDI4Biodiversity: a German infrastructure for biodiversity data. Biodiversity Information Science and Standards 6: e93869.
https://doi.org/10.3897/biss.6.93869

Abstract

Digital data have become an indispensable basis for biodiversity research. Sustainable curation, archiving, accessibility and integrability according to the FAIR principles ("Findable, Accessible, Interoperable and Reusable", Wilkinson et al. 2016) are essential for re-use to answer pressing questions in a rapidly changing environment.

As part of the German multidisciplinary National Research Data Infrastructure (NFDI), the NFDI4Biodiversity consortium with 49 partners, spanning a broad spectrum from academia, to agencies, learned societies, and citizen science, has set itself the goal of providing a sustainable data infrastructure for biodiversity research. NFDI4Biodiversity builds on the German Federation for Biological Data (GFBio) project (2014–2021) and the GFBio e.V. founded in it, both organisationally and in the provision of services. These include a data submission and archiving system, support for the creation of data management plans and certification, portal functions with extensive data visualization and terminology services flanked by helpdesk, support and outreach activities*[1] (Diepenbroek et al. 2014).

Within the framework of NFDI4Biodiversity, these services will be expanded, based on (and calibrated by) the requirements of 23 concrete use cases from manifold biodiversity research domains. A central new component is the development of a capable multi-cloud

© Luther K et al. This is an open access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

platform, the "Research Data Commons" (RDC) where data can be aggregated, semantically linked and enriched with external services (Glöckner et al. 2020).

Alongside the development of the services, the potential for joint use of standards and service components will be exploited through cooperation with existing data infrastructures. In addition to other NFDI consortia, international infrastructures and comparable national initiatives will play a special role; this process was already started with a symposium during the 2019 Biodiversity Next conference.

Keywords

NFDI, data centre, FAIRness

Presenting author

Katja Luther

Presented at

TDWG 2022

References

- Diepenbroek M, Glöckner FO, Grobe P, Güntsch A, Huber R, König-Ries B, Kostadinov I, Nieschulze J, Seeger B, Tolksdorf R, Triebel D (2014) Lecture Notes in Informatics (LNI), Proceedings - Series of the Gesellschaft fur Informatik (GI). LNI-Reihe (P-232). INFORMATIK 2014 - Big Data Komplexität meistern, Stuttgart, January. Köllen Verlag, Bonn URL: https://species-id.net/s/media/6/61/Gfbio_informatik2014.pdf
- Glöckner FO, Diepenbroek M, Felden J, Güntsch A, Stoye J, Overmann J, Wimmers K, Kostadinov I, Yahyapour R, Müller W, Scholz U, Triebel D, Frenzel M, Gemeinholzer B, Goesmann A, König-Ries B, Bonn A, Seeger B (2020) NFDI4BioDiversity - A Consortium for the National Research Data Infrastructure (NFDI). zenodo. https://doi.org/10.5281/zenodo.3943645
- Wilkinson M, Dumontier M, Aalbersberg IJ, Appleton G, Axton M, Baak A, Blomberg N, Boiten J, da Silva Santos LB, Bourne P, Bouwman J, Brookes A, Clark T, Crosas M, Dillo I, Dumon O, Edmunds S, Evelo C, Finkers R, Gonzalez-Beltran A, Gray AG, Groth P, Goble C, Grethe J, Heringa J, 't Hoen PC, Hooft R, Kuhn T, Kok R, Kok J, Lusher S, Martone M, Mons A, Packer A, Persson B, Rocca-Serra P, Roos M, van Schaik R, Sansone S, Schultes E, Sengstag T, Slater T, Strawn G, Swertz M, Thompson M, van der Lei J, van Mulligen E, Velterop J, Waagmeester A, Wittenburg P, Wolstencroft K, Zhao J, Mons B (2016) The FAIR Guiding Principles for scientific data management and stewardship. Scientific Data 3 (1). https://doi.org/10.1038/sdata.2016.18

Endnotes

*1 https://gfbio.dev/services/